Thursday 10/21 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_

|  |
| --- |
| Objective: |

Arc Length

F

s

G

a = - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

s - \_\_\_\_\_\_\_\_\_\_\_\_\_\_

a

H

**Find the length of each darkened arc. Leave your answer in terms of π*.***

I Do We Do

|  |  |
| --- | --- |
| 1.    1 in | 2.    1 in |

Next, let’s see if we can discover what happens to the arc length if we change the radius.

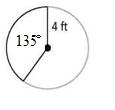
|  |  |
| --- | --- |
| 3. | 5.    6 in |
| 4.    15 in | 6. |

Write your observations, what happened to the arc length when we changed the radius?

Now, let’s see if we can discover what happens to the AREA of the sector if we change the radius. I do We do

|  |  |
| --- | --- |
| 7.    1 in | 10.    1 in |
| 8. | 11.    6 in |
| 9.    15 in | 12. |

Write your observations, what happened to the AREA when we changed the radius?



Final Check:

Find the arc length of the darkened arc: Find the area of the sector:

Predict the arc length if the radius is changed to 8ft: \_\_\_\_\_\_\_\_

Predict the area of the sector if the radius is changed to 12ft: \_\_\_\_\_\_\_\_

You Do

**Find the length of each darkened arc. Leave your answer in terms of π*.***

|  |  |
| --- | --- |
| 13. | 19. |
| 14. | 20. |
| 15. Find the area of the sector in problem 13 |  |
| 16. Find the area of the sector in problem 14 |  |
| 17. Predict the length of the arc in problem 13 if the radius was changed to 5 cm. |  |
| 18. Predict the area of the sector in problem 13 if the radius was changed to 20 cm. |  |